

LTO Ultrium Cleaning Cartridge Q & A

**FAQ – Which type of LTO Ultrium Cleaning Cartridge is compatible with my drive?
What is the life of an LTO Ultrium Cleaning Cartridge; how many drive-cleans?**

Answer – IBM, Seagate⁽¹⁾ and HP manufactured LTO-Ultrium drives that use different Cleaning Cartridges, Fujifilm Type I, S and H respectively. Additionally, Fujifilm introduced a Universal Cleaning Cartridge, which is compatible all manufacturers' LTO Ultrium drives, in May of 2002. How many times the drive will allow a cleaning cartridge to be used depends upon the drive; the drive sets the Maximum Uses Limit, not the Cleaning Cartridge.

Each Cleaning Cartridge has an RF (Radio Frequency) LTO-CM (Cartridge Memory); the drive will communicate with this memory and enters the cleaning mode if the Cleaning Cartridge is compatible. If the CM shows the Cleaning Cartridge is identified as an incompatible type, it will not be used and the drive reports "Invalid Cleaning Media" (for example, if a Type-I or Type-H were inserted into a Seagate⁽¹⁾ Drive, which uses Type-S).

The drives use the CM to keep track of the number of times the Cleaning Cartridge has been used. When a drive sees that a Cleaning Cartridge has already been used the maximum number of times (as determined by the drive's firmware) it will no longer use that Cleaning Cartridge and the drive will report "Expired Cleaning Media."

The table shows the maximum number of times the drive allows the cleaning cartridge to be used before reporting that the cartridge is expired (for example drives, assuming compatible firmware).

LTO Ultrium Drive Manufacturer/Model	Fujifilm Ultrium Cleaning Cartridge	Part Number**	Maximum Cleanings
IBM 3580 and IBM StorageSmart (Full-Height) LTO Ultrium Drives	Type-I	26200017	50
	Universal***	26200014	
IBM StorageSmart Half-High LTO Ultrium Drive (P/N 24P2396)	Type-I	26200017	15
	Universal***	26200014	
Seagate*/Certance LTO Ultrium Drives	Type-S	26200015	50
	Universal***	26200014	
HP LTO Ultrium Drives	Type-H	26200016	15
	Universal***	26200014	

* Firmware version 1300 or later required for reliable Type-S operation. ** New Product Code #'s assigned December 2002.

***** Fujifilm introduced a Universal Cleaning Cartridge (UCC) in May 2002. LTO UCC is compatible with all Ultrium 1, Ultrium 2 and Ultrium 3 drives. All existing Ultrium 1 drives, made prior to mid-2002, require a firmware upgrade to use the UCC.**

(1) Seagate Removable Storage Solutions (RSS) is now named Certance (April 2003) – Certance is now owned by Quantum.

**LTO Cleaning Cartridge Troubleshooting –
See Frequently Asked Questions on Page 2**

LTO Ultrium Drive Cleaning Cartridge Troubleshooting FAQ

Question The new LTO Universal Cleaning Cartridge (UCC) goes into an Ultrium 1 drive and immediately ejects without performing a cleaning cycle. Why isn't a UCC working in my Ultrium 1 drive?

Answer Specific revisions of the drive's firmware are needed for proper operation. The LTO Universal Cleaning Cartridge (UCC) began shipping in May 2002. The UCC is compatible with all Ultrium drives; however, any Ultrium 1 drive made before mid-2002 requires a firmware upgrade for UCC. Contact your drive manufacturer or system vendor for firmware upgrade information.

Another possibility is that you have already used the cleaning cartridge its maximum number of times and it is expired – see last Q/A below.

For other explanations for a UCC and/or Drive-Specific Cleaning Cartridge that immediately ejects from the drive without performing a cleaning cycle – see the next Q/A.

Question I am certain that I'm using the correct cleaning cartridge for my Drive Model and Firmware Level – and still the cleaning cartridge goes into the drive and immediately ejects without performing a cleaning cycle. Why?

Answer Some drive models DO NOT allow cleaning unless the drive is requesting a cleaning cartridge. If you insert a cleaning cartridge when the drive does not need to be cleaned, the drive will automatically reject the cleaning cartridge.

Other drive models do allow periodic cleaning, but NOT when the drive has been cleaned too recently (the drive is preventing excessive cleaning, which can cause wear on drive heads). If the drive is not requesting to be cleaned and you insert a cleaning cartridge too soon after the last cleaning, the drive will automatically reject the cleaning cartridge.

Of course, all drive models automatically eject an expired cleaning cartridge without performing a cleaning cycle. Discard the cleaning cartridge when it has reached the maximum number of uses for your drive model.

Question How many drive cleanings can I get from my LTO Cleaning Cartridge?

Answer The number of drive-cleaning uses for an LTO Cleaning Tape is dependent on the drive manufacturer/model. Please see the specifications in your drive manual or contact your drive manufacturer or system vendor for the number of cleanings allowed before the cleaning cartridge is expired. See example information listed in the chart on page one.

The LTO Universal Cleaning Cartridge (LTO-UCC) is compatible with all Ultrium 1 (see first Q/A) drives and all Ultrium 2 drives and all Ultrium 3 drives. However, number of cleaning uses still varies by drive model.

Keep track of the number of times used and discard a cleaning cartridge when it has reached the maximum number of uses for your drive model.